Seat No.:_____

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

DEPARTMENT OF COMPUTER APPLICATIONS

Program: Bachelor of Computer Applications

Semester-I End Semester Examination (Practical)

Date:14-10-2019 Day: Monday Duration: 10:15AM- 11:15AM

BCA1112C04 Introduction to Programming using Python Lab Marks: **40**

Batch-C

INSTRUCTIONS:

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1. Attempt all.
2. In the beginning of each file, write the program objective, name of programmer, date of program creation, programming language and version of program.
3. Name your variables appropriately.
4. Add comments whenever necessary. Functions should have doc string.

SET A

Q1. **10**

Write a program to roll a dice for as much time as the user wishes to.

Hints:

import random module.
Take help about a function in the random module which generates random numbers.
A dice has 6 sides consisting of values 1-6.
Use indefinite loop.

Q2. **10**

Write a function that determines how many days there are in a particular month. Your function will take two parameters: The month as an integer between 1 and 12, and the year as a four digit integer. Ensure that your function reports the correct number of days in February for leap years. Include a main program that reads a month and year from the user and displays the number of days in that month.

Q3.

Write a module named mymath consisting of following functions:

square(n)
cube(n)
power(a,n)
sqrt(n)
cubert(n)
nthroot(n) # A function that finds nth root of a number.
PI # Create a constant PI with value 3.1415
e # Create a constant e with value 2.71

Note: Write documentation string along with all the functions of the said module.

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Perform the following tasks using your module.

a) Generate the Web Documentation using Pydoc Module. **5**
b) Print the contents of your module. **5**
c) Use all the functions of the module mymath into your program and calculate the area of a circle, also Calculate the sqaures, cube, power n and squareroot, cuberoot and nth root of the values of a list and print the result as follow: **10**

List Index	List Item	Square	Cube	Power^n	Square Root	Cube Root	N^{th} Root
myLst[0]	4	16	64	16 (Power^2)	16	2	X	X
